DOCUMENT RESUME

ED 205 197 IR 009 501

AUTHOR Stepp, Thomas L.
TITLE Comments at the National Conference on Technology and Education.
PUB DATE 27 Jan 81
NOTE 24p.: Paper presented at the National Conference on Technology and Education (Washington, DC, January 27, 1981).

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Cost Effectiveness; Educational Radio; *Educational Television; State Programs; *Telecommunications; *Teleconferencing; Training Methods
IDENTIFIERS *South Carolina Educational Television

ABSTRACT

A central argument for the existence of the South Carolina Educational Television Network (ETV) follows an economic theme. In the last three years ETV has conducted 319 teleconferences to provide specialized training for 74,000 people. The use of teleconferences during that period of time has provided services that could have cost the state eight to nine million dollars by traditional methods. Prior to each general election, South Carolina has some 8,000 poll workers who must undergo mandatory training by the State Election Commission. For the last three elections, these 8,000 people have received their two days of training through ETV at a savings to the state and to the trainees of over $1,300,000. Over the past ten years, the cost of delivering a television course to a school in South Carolina has dropped over 47 percent, while the average cost of a school textbook has risen approximately 300 percent during the same period. It is predicted that telecommunications will play an increasingly important role in the delivery of instruction for children in school, programs for college credit, continuing professional education, technical education, the visually handicapped, and other special groups. (LLS)

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COMMENTS AT THE NATIONAL CONFERENCE ON TECHNOLOGY AND EDUCATION

January 27, 1981

by

Thomas L. Stepp

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COMMENTS
THOMAS L. STEPP, DEPUTY MANAGER
SOUTH CAROLINA EDUCATIONAL TELEVISION NETWORK

THE NATIONAL CONFERENCE ON TECHNOLOGY AND EDUCATION
January 27, 1981

Good morning.

It is a privilege for me to be here at a Conference which has brought together such a wide variety of distinguished leaders in educational communications activities. I am particularly pleased with the opportunity to appear with these distinguished fellow panelists to speak to the topic of technology in schools, not from a broad, superficial point of view, but rather from the point of view of local impact in local schools.

The reason that this perspective is important

(from my experience) is that all of the applications of educational technology which exist are completely moot if individual students and teachers in schools and other educational institutions are not motivated to use the product which those of us who are program distributors provide. We can engage in a lot of planning. We can engage in a lot of sophisticated instructional design. We can spend vast sums of money producing highly attractive radio and television courses. We can provide tape recorders in classrooms to improve the smooth integration of our product into overall instructional plans. But if our products do not suit the educational needs of individual students and teachers they are valueless. The grandest scheme

for production and distribution is worthless if it is not utilized.

In South Carolina we transmit signals hundreds of miles. Our national programs travel 22,300 miles to a satellite half-way point, returning to earth over a wide geographic terrain. None of that is of any merit if a one-quarter inch, off-on button on a television screen or radio receiver negates the use of our services by the students for whom they are intended. It is impossible to consider technology in schools without considering the impact of an individual program on an individual student in a specific classroom under the supervision of a dedicated teacher in a school system devoted to principles of improving instruction

for all of its students.

I don't want to bore you by describing the South Carolina Educational Telecommunications System. I think perhaps many of you know something about what we do. For those of you who do not, let me briefly state that within South Carolina we--the South Carolina ETV Network--operate 10 television transmitting stations, 6 FM radio stations and an extremely complicated closed circuit, statewide network made up of leased cable, ITFS, state-owned microwave, and the physical delivery of tape. In South Carolina, we apply this technology to all of the educational needs of the State. We produce and distribute programs for preschoolers, for the elementary grades, for secondary schools, for

college credit (in fact, offering more courses for college credit than any other institution in the world, more than 60 last year), for post-graduate education (including two dynamically unique programs through which a student can achieve a Masters Degree in either Business Administration or Engineering during evening hours from any geographic location in the State. We extend our college credit to home viewers, in an "open university concept." And, of course, we provide the entire array of public television and radio programming for all of South Carolina.

In cooperation with NOAA, we operate the State's comprehensive twenty-four hour weather and emergency weather services. And I am very, very proud of the

efforts we make in providing 12 hours per day of special programming for the visually handicapped broadcast on the subcarriers of our FM radio stations.

Many times, when discussing my trade in public, I speak from three major points of reference and they generally deal with, first, the impact of electronic telecommunications on the lives of each of us. The second point is the information explosion and the usefulness of telecommunications delivery in meeting the demands for increased educational opportunities and needs. And, third, both at home and out of the state, I like to talk about the economy of telecommunications as an important and significant new means of providing educational opportunity to all citizens no matter how

remote they might be in socioeconomic status or geography from the traditional centers of learning.

I think that you will probably join me in understanding the now traditional concept that the application of man's most powerful communications tool--television--to our daily lives has changed the way we live. My late friend and colleague, Marshall McLuhan, was the proponent of "probes" dating from the early '50's about the flow of electronic communications into our daily lives and the resultant impact on us. We're like fish who are not aware of the water in which they live, in that we live in an electronic ecology and are not always, I think, aware of the impact of that ecology on us day by day. Parents often tell me they

are startled to learn that, according to recent Neilson data, children under five watch television 23 1/2 hours a week. I don't know why they're surprised. The same data reflects that they watch television 44 hours a week.

Arthur Clark, creator of 2001 said, "The single greatest industry of the future is going to be education. For every person, education will have to continue throughout life. That will be esential in a world where half the things a man knows at 40 hadn't even been discovered when he was 20; and half the things he knows at 20 are no longer true by the time he is 40." Ninety percent of the scientists who have ever lived are alive today.

Our task in educational communications is to try

to make just coping with the information explosion even possible.

I realize that this morning we particularly want to emphasize the means by which technology-based programs evaluate and report their effectiveness to the publics we serve and to talk about the means by which we justify our existence to the various decision makers and funding authorities under whose purview most of us work.

To put our efforts in perspective, I would like to make a few points about the impact of the South Carolina System in areas other than the public schools before turning directly to the specifics that you have asked me to present today. A major and most exciting development in our operation is that we have moved actively into a

significant degree of statewide teleconferencing. We are pioneering in this area, which is going to become increasingly important as state agencies are forced by the pressures of inflation to become more cost conscious. Teleconferencing is a way for groups to meet and receive essential training without expensive travel to a central location. The very best experts on any subject can be brought in to provide information and to conduct meetings. Their audience can be at any of South Carolina's technical education centers, University of South Carolina regional campuses, health care centers, hospitals and many high schools. Through teleconferences, state agencies have been conducting training, making surveys and meeting other management communications

needs. Viewers in the field talk to experts at the ETV Center in Columbia by way of telephone talkback circuits.

The State of South Carolina saves per diem, mileage, lodging costs, training costs, lost time from the job, and wear and tear on vehicles by meeting through teleconferences. ETV saves money for the State by moving information to people--electronically--rather than by transporting people--at great cost--to the traditional information centers. This is a major basis of justification of our System to policy makers and decision makers. I do not mean just teleconferencing; I mean the presentation of the advantages of economy and efficiency of telecommunications services.

When a comprehensive telecommunications center exists, the economics of scale of its operation are the most dynamic and forceful reason by which to explain its importance. It is certainly a mainstay of how we justify our institution to the State of South Carolina.

Now, quickly, I must insert that, yes, it is most important that we speak to the quality of product which we deliver and to the quality of educational opportunities that we provide to students of all ages, in all areas of education.

However, in these harsh economic times it is crucial that we also justify ourselves on the scale of economic efficiency. And that is what we do.

Take teleconferencing, for example. In the last

three years ETV has conducted 319 teleconferences for our fellow state agencies, providing specialized training for 74,000 people. The use of our closed circuit network for teleconferences during that period of time has provided services that could have cost the State eight to nine million dollars by traditional methods. That figure is equal to the total three-year leasing cost for the entire closed circuit system, with only a small percentage of the time of the closed circuit being required for the teleconferencing activities which achieve these savings. The remainder of the time is available for, and heavily used for, in-school instruction, higher education, medical education, and many other services.

Let me give you just one specific example of the economic impact of teleconferencing. Prior to each general election the State of South Carolina has some 8,000 poll workers who must undergo mandatory training by the State Election Commission. Prior to the last three elections, these eight thousand workers have received their two days of training through ETV at a savings to the State and to the individuals involved (who are volunteers) in lost time from the job, mileage, lodging, per diem and instructor costs of over $1,300,000 per statewide election. That is a total savings of nearly $4 million during a six-year period.

That is language that legislative leaders, school boards, college trustees, governors and citizens understand.

There is no longer any question that it is much more economical to take education to people than to take people to education. Marshall McLuhan, to whom I referred earlier, once said that "...when two disparate situations are placed in apposition, often startling results occur." So it is with the energy crisis and increased telecommunications capacity.

A central argument for the existence of the South Carolina Educational Telecommunications System follows an economic theme. In 1961, shortly after we began serving schools in South Carolina, we taught 3,300 students at a cost per student of $194.85. By 1979, we were serving 1,691,669 course enrollees at a cost of $5.83 per course delivered to a student. Let me

repeat the dollar numbers: 1961--$195, 1979--$5.83.

Let's look at that in a slightly different way. Ten years ago the delivery of a television course to a school in South Carolina cost roughly $10 per course per student. In those ten years, the cost of that delivery of television instruction has dropped to $5.83, a drop of 47.3 percent. At the same time, the average cost of a school textbook in South Carolina increased approximately 300 percent. A $2.59 textbook in 1975 now costs $7.38.

Justify telecommunications education? Why not use a dollars and cents approach? The entire South Carolina Educational Telecommunicatons System, which has one out of every seven South Carolinians enrolled

in at least one of the 346 courses of instruction offered through our system, costs only 1.2 percent of the State's education budget. And that is the cost of the entire delivery system and programs for public television and radio viewers and listeners, programs for children in school, programs for college credit, for continuing professional education, for technical education, for doctors, lawyers, nurses, the visually handicapped and others.

For 1.2 percent of the South Carolina education budget, we deliver 176 television lessons in a typical school day. Yes, on our multi-channel system that amounts to over 80 hours per day of instructional television delivery. And, don't forget radio in addition.

Thus, I have no trouble in looking toward the future to predict that telecommunications will play an increasingly major role in education--particularly as adapted, specialized and particularized for local educational needs. Telecommunications improves the quality of instruction. It imparts knowledge skillfully and permits one to learn wherever he is in the educational process. And it permits him to learn equally with others no matter where he is in a geographic sense. Educational telecommunications is like a beam of light. It provides illumination to help us cut through the fog of change that could otherwise obscure the world ahead. Telecommunications allows us to more quickly and ably move from one point to another as we strive to generate

creative worth from our intellectual enterprise. Communications technology is an integral part of the process transforming our lives and shaping our destiny.

But in a more overriding sense, it is economics which will compel the use of telecommunications in education. Our system in South Carolina has shown this clearly. There are many other justifications. But rather than look around for means to justify our existence, I am proud of the fact that, in South Carolina, we have taken a strong stand on the usefulness of television and radio in education and have proceeded to put those dynamic tools to work. In putting them to work we have found that one service stacks naturally on top of another service and additional services

compound the efficiency of delivery geometrically. Herein lie vast economies of scale which make use of the system compelling.

No user has to use any program which we provide. Therefore, the statistics concerning the enrollment in our courses are very significant to us in that enrollment is voluntary and engaged in solely at the discretion of the user. Increases in in-school utilization alone are indicative of a great deal of success in what we have accomplished. Innovations in providing new services are equally impressive and, indeed, have begun to become part of our basic justification of the System.

I think we need to be careful, however, that we

do not let the need to justify the system control its purpose, direction, or the motivations for its use. The South Carolina System was created to enhance the educational opportunities for every citizen in the State. We are beginning, after 22 years of hard effort, to work our way toward doing that. The capacity required for delivery of our services was virtually unpredictable. Each new service generates another. The number of users we serve is startling, compared to two decades ago.

Serving these people is the reason we are in existence. Edward R. Murrow once said that "The trouble with television is that it is like a sword rusting in the scabbard during a battle for survival." Frequently, however, I confess that the more pragmatic way to explain

the impact of what we do must include both economics as well as philosophy and educational accomplishment.

In South Carolina I sincerely believe that with the support of teachers, superintendents, State education officials, boards of education, colleges, universities, legislatures and governors, we have--through the years--proved that there is a major place and a major role for a significant educational broadcasting system to impact on the educational progress of an entire state.

Thank you very much for allowing me to be with you today. I will be happy to discuss any aspects of the South Carolina System with you and to discuss with this panel other means by which our viewers and users become convinced of the merit and worth of our endeavors.